

METHOD FOR FAST EXECUTION OF TRANSLATED BINARY CODE UTILIZING
DATABASE CACHE FOR LOW-LEVEL CODE CORRESPONDENCE

ABSTRACT OF THE DISCLOSURE

The present invention increases efficiency of a binary translation process by correlating selected foreign code to previously translated binary host code. This approach eliminates repetitive translation of foreign code when the foreign code is executed on a host computer system. During the translation process, a database of translated foreign code is populated and thereafter a software layer checks for correspondence between the foreign code and binary code stored in the database. If the database contains corresponding code, that code is transferred to system memory for execution and there is no need to retranslate the foreign code. Minimizing the time spent translating the foreign code results in improved execution speed on the host computer system. The software layer creates an index into the database by hashing the foreign code or by using the storage location of the foreign code. By way of example, the sector of a disk drive where the foreign code is stored determines the index into the database.

SF 1214565 v1

20181-005000US-41